

Attachment No. 4

Loading Emissions

MERIT ENERGY COMPANY Y
 RROBERT DRISCOLL "A" BATTERY
 DUVAL COUNTY, BENAVIDES, TEXAS
 PERMIT BY RULE FILING

Storage Tank and Loading Emissions

<u>Storage Tank VOC Emissions from E&P Tanks Program</u>				
	<u>Pounds per year</u>	<u>Tons per Year</u>	<u>Lbs per Hour</u>	
T-1	2568.99	1.2845	0.2933	
T-2	2568.99	1.2845	0.2933	
T-3	2568.99	1.2845	0.2933	
T-4	2196.51	1.0983	0.2507	
T-5	2133.47	1.0667	0.2435	

<u>Total Emissions</u>	<u>6.0185</u>	<u>1.3741</u>
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Loading Emissions

Tank	Sales Volume (Q) mbbls/yr	Saturation Factor (S)	True Vapor Pressure (P)psia	Vapor Molecular Weight (M)	Oil Temperature (T) Degrees R	Loading Losses (lbs/1,000 gal)	VOC Loading Emissions (tons/yr)
TANKS	72.05	0.6	5	50	508	3.679133858	5.566713484

Loading Losses (lbs/1,000 gal) = $\frac{12.46 \cdot S \cdot P \cdot M}{T}$ (AP42 Section 5.2, Equation 1)

Loading Emissions (tons/year) = $\frac{\text{Loading Losses (lbs/1,000 gal)} \cdot Q \cdot 42 \text{ gal/bbl}}{2,000 \text{ lb/ton}}$

Degress Rankine = Degress F + 460